
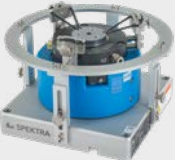


	HERO™ vibration controller incl. signal conditioners
	CS Q-LEAP™ software <ul style="list-style-type: none"> • sine calibration • sine sweep • vibration measurement • vibration generation • more on demand
	SE-09 high-frequency vibration exciter
	Power amplifier PA 500 DM
	all-digital laser vibrometer incl. vibration isolation and positioning device for the laser head



Typical DUT

- PE transducer
- IEPE transducer
- VC transducer
- PR transducer
- digital transducer with SPI, I2C, DTI, and many other interfaces
- vibration meter
- laser vibrometer
- vibration calibrator



Standards

- ISO 16063 - 11: Primary calibration of vibration transducers
- ISO 16063 - 21: Calibration of vibration transducers by comparison to a reference transducer
- ISO 16063 - 41: Calibration of laser vibrometers
- ISO 17025: General requirements for the competence of testing and calibration laboratories



Key features



Frequency range 5 Hz ... 20 kHz (50 kHz)



Traceable to PTB (German National Metrology Laboratory)



Calibration of vibration sensors, measurement systems and calibrators



Integrated sensor database



Integrated software for the generation of calibration certificates (print, PDF,...)
Easy data exchange with applications like ERP systems or measuring equipment databases



Frequency range	5 Hz... 20 kHz (... 50 kHz without traceability)
Acceleration, max.	400 m/s ² (40 g _n) peak
Velocity, max.	0.5 m/s (19.7 inch/s)
Displacement, max.	7.5 mm (0.3 inch)
DUT Weight, max.	350 g (12 oz)
Sensitivity of ref. accel.	1 mV / m/s ² (10 mV / g _n)
Laser vibrometer	Class 2 helium-neon laser with 632.81 nm wavelength; digital interface between laser and vibration controller

Frequency range		Max. recommended payload	Expanded measurement uncertainty ²⁾	
from	to		magnitude ³⁾ / phase ¹⁾	display deviation (ref. laser vibrometer)
5 Hz	< 20 Hz	200 g	0.5 % / 0.5°	0.2 %
20 Hz	1 000 Hz		0.3 % / 0.5°	
> 1 000 Hz	5 000 Hz		0.5 % / 0.5°	
> 5 000 Hz	10 000 Hz	50 g	1.0 % / 1.0°	0.3 %
> 10 000 Hz	15 000 Hz		2.0 % / 2.0°	0.4 %
> 15 000 Hz	20 000 Hz		2.5 % / 3.0°	0.5 %
Reference frequencies: 80 Hz, 100 Hz, 160 Hz		200 g	0.3 % / 0.5°	0.2 %

Recommended excitation amplitudes (peak values)	
Minimum	0.1 m/s ²
Maximum (high payload) ⁴⁾ (displacement, velocity, acceleration)	4 mm in the range 5 Hz... 12 Hz 0.3 mm/s in the range 12 Hz... 53 Hz 100 m/s² in the range 53 Hz... 40 kHz
Maximum (low payload) ⁵⁾ (displacement, velocity, acceleration)	4 mm in the range 5 Hz... 12 Hz 0.3 mm/s in the range 12 Hz... 106 Hz 200 m/s² in the range 106 Hz... 20 kHz

1) Requires software option for phase response measurements

2) Determined according to GUM (JCGM 100 „Evaluation of measurement data - Guide to the expression of uncertainty in measurement“) with k = 2 (coverage factor) for the best possible device under test (DUT). Other devices that are not assumed as ideal must be evaluated with individual contributions.

3) Valid for electrical sensor signals ≥ (1 mV or 1 pC)

4) Maximum vibration amplitude for maximum payload (DUT)

5) Maximum vibration amplitude without any payload (DUT)

